

# ★ ABOVE THE FOG

• BULLETIN OF THE SAN FRANCISCO AMATEUR ASTRONOMERS •

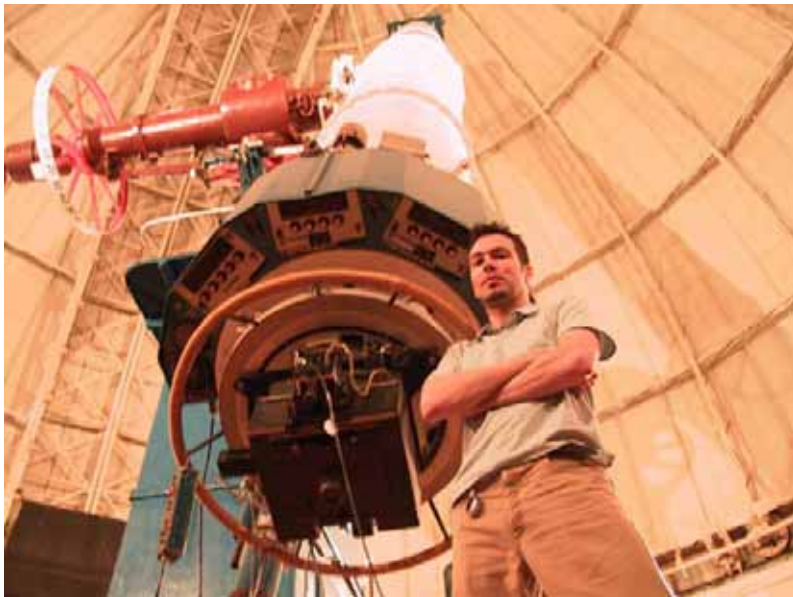
Vol. 55, No. 8 – August 2007

**August 15, 2007 – General Meeting**

7:00 pm Doors Open . 7:30 pm Announcements . 8:00 pm Speaker

**RYAN WYATT, DIRECTOR, MORRISON PLANETARIUM**  
GOLDEN GATE PARK, SAN FRANCISCO

## **BUILDING THE NEW MORRISON PLANETARIUM**



When the California Academy of Sciences reopens in late 2008, it will feature a completely rebuilt Morrison Planetarium. Utilizing the latest in digital dome technology, the new Morrison will help redefine the planetarium for the 21st Century---providing an exciting immersive forum for science visualization across a variety of disciplines. Today's technology allows us to convey scientific concepts with unprecedented fidelity, using actual research data as the foundation of our storytelling. With immersive video

technology, the dome will be filled with computer-generated visuals that depict current scientific discoveries in an exceedingly visceral way. An "immersed" audience member becomes part of the action---and part of the science. The new Morrison will bring the latest research to diverse audiences, capitalizing on the international research program at the California Academy of Sciences.

For more information on the new California Academy of Sciences, please take a look at [the Academy's website](#).

*Ryan Wyatt assumed his role as Director of Morrison Planetarium and Science Visualization at the California Academy of Sciences in April 2007. Prior to arriving in San Francisco, Wyatt worked for six years as Science Visualizer at the American Museum of Natural History in New York City; previously, he opened technologically-advanced planetariums in Phoenix, Arizona, and Albuquerque, New Mexico. Wyatt's professional interests include making research data sets accessible to the general public, and developing standards and "best practices" in the [fulldome video](#) community. A [paper co-written for Natural History magazine](#) reflects on the role of modern planetariums in bringing cutting-edge science to a variety of audiences, and his ["Visualizing Science" blog](#) provides an informal look at his ideas and opinions related to visual representations of science. Wyatt also indulges avid enthusiasms for archaeoastronomy of the Maya, history of science, and intersections between art and science.*

## 2007 CI ub Officers & Contacts

<i>President</i>	<b>Kenneth Frank</b>	president@sfaa-astronomy.org
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<i>Webmaster</i>	Lon Carter	
	Joe Amato	Web-master@sfaa-astronomy.net

## CI ub Telescopes

The SFAA owns eight very fine, easy to use, loaner telescopes well-suited for deep sky, planets, and star parties. All scopes are available to any SFAA member. The loaner custodians for the majority of our fleet are Pete & Sarah Goldie. Please contact them at [pg@lbin.com](mailto:pg@lbin.com) for details if you are interested in borrowing a scope or if you have items you can donate for the loaner program (eyepieces, star maps/books, red flashlights, collimator, etc.). Please contact the appropriate member indicated below if you are interested in borrowing one of the telescopes.



1) 6" f/10.3 Dobsonian/Ken Frank [president@sfaa-astronomy.org](mailto:president@sfaa-astronomy.org)

2) 8" f/7 Dobsonian/Pete Goldie

3) 8.5" f/6 Dobsonian/Pete Goldie

4) 10" f/8 Dobsonian/Pete Goldie

5) 114mm f/4 Newtonian StarBlast/Pete Goldie

6) 8" f/10 Celestron SCT/Annette Gabrielli/[agabrielli-sfaa@sbcglobal.net](mailto:agabrielli-sfaa@sbcglobal.net)

7) 8" f/10 Meade SCT/Stefanie Ulrey/[treasurer@sfaa-astronomy.org](mailto:treasurer@sfaa-astronomy.org)

8) 9.5" f/5.6 Celestron Newtonian/Ken Frank/[kennethfrank@planitarium.net](mailto:kennethfrank@planitarium.net)

## CI ub Astronomy Videos

The SFAA owns a series of astronomy videotapes featuring Alex Filippenko, a world-renowned professor of astronomy at UC Berkeley. The videotapes provide an introduction to astronomy and cover topics such as the Solar System, the lifecycles of stars, the nature of galaxies, and the birth of the Universe. The SFAA loans the tapes free to all members. If you are interested in viewing these tapes, you may check them out at any of the SFAA General Meetings. These tapes were kindly donated to the SFAA by Bert Katzung. For information on the course tapes themselves:



<http://www.teach12.com/ttc/assets/coursedescriptions/180.asp>

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## Membership Dues

Membership is billed for each upcoming year on June 30. Members may receive no more than one bulletin after the expiration of membership.

### SFAA Website and Online Services



The SFAA web site at [sfaa-astronomy.org](http://sfaa-astronomy.org) is provided to our members and the general public for the sharing of club information and services. The web site contains links for club [star parties](#), [events](#), [newsletters](#), [lectures](#) and [meetings](#). If you wish to interact with other people who are

interested in astronomy, the SFAA web site offers public and members only [bulletin board forums](#). If you wish to remain up-to-date on club activities, then we encourage you to subscribe to one or both of our public [mailing lists](#), which will allow you to receive our newsletter and/or club announcements via email. Other useful and interesting information and services are available on the site such as [observing location reviews](#), member [astronomy photos](#), and [members only telescope loans](#). Information about SFAA's membership, organization and by-laws are available at the club's online public document [archive](#). If you need to contact a representative of the SFAA, then please visit our [contacts](#) page to help in finding the right person to answer your questions.

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***Above the Fog*** is the official bulletin of the San Francisco Amateur Astronomers. It is the forum in which club members may share their experiences, ideas, and observations. We encourage you to participate by submitting your articles, announcements, letters, photos and drawings. We would also like to hear from our new members. Tell us about yourself – what you have done in the past and what other clubs you have joined. **The deadline for the next issue is the 20th day of the month.** Send your articles to [Editor@sfaa-astronomy.org](mailto:Editor@sfaa-astronomy.org).

# IMPORTANT DATES

## SFAA GENERAL MEETINGS & LECTURES

Wednesdays - August 15, September 19, October 17

**NOVEMBER MEETING IS CANCELLED**

7:00 p.m. Doors open. 7:30 p.m. Announcements. 8:00 p.m. Speaker  
Randall Museum, 199 Museum Way (Near 14<sup>th</sup> Street and Roosevelt)

## BOARD MEETINGS

Tuesdays - August 14, September 11, October 9

7:00-8:30 p.m.

Randall Museum, 199 Museum Way  
(Near 14<sup>th</sup> Street and Roosevelt)

## MT TAM STAR PARTIES – SPECIAL USE PERMIT – MEMBERS ONLY

SATURDAYS -- August 11, 7:59 p.m. – Gatekeeper **VOLUNTEER NEEDED**

September 8, 3:00 P.M. - **ANNUAL STAR-B-QUE - BOOTJACK CAMP**

7:21 p.m. MEMBERS ONLY STAR PARTY

Gatekeeper **VOLUNTEER NEEDED**

October 13, 6:29 p.m. – Gatekeeper **VOLUNTEER NEEDED**

## CITY STAR PARTIES - Telescope Clinic one hour before sunset

**VOLUNTEERS ARE ALWAYS NEEDED**

Saturday, August 25, 7:42 p.m. at Land's End (Point Lobos)

Saturday, September 22, 7:00 p.m. at Randall Museum

Saturday, October 20, 6:19 p.m. at Land's End (Point Lobos)

Weather may cancel the City Star Party. Call the SFAA Hotline at (415) 289-6636 AFTER 4 PM to learn the status of the event and the location. If the hotline announces the Star Party is cancelled, the Telescope Clinic and Lecture are cancelled as well. However, if the Hotline does not cancel the Star Party, be assured that the Lecture will proceed as scheduled even given less-than-perfect telescope conditions.

Please note that while City Star Parties WILL ALWAYS be held on Saturdays, some will be closer to the last quarter phase of the moon, while others will be close to first quarter. This is so we can work around dates for Mt. Tam public star parties as well as our members-only events on Mt. Tam.

Map and directions – Land's End (Pt. Lobos) <http://www.sfaa-astronomy.org/clubarchive/directions-pointlobos.php>

## 2007 SAN FRANCISCO AMATEUR ASTRONOMERS LECTURE SERIES

RANDALL MUSEUM THEATER, Randall Museum, 199 Museum Way, San Francisco

FREE & OPEN TO THE PUBLIC [sfaa-astronomy.org](http://sfaa-astronomy.org)

7:30pm, Randall Museum Theater [randallmuseum.org](http://randallmuseum.org)

## SEPTEMBER 19 - CHRIS FORD, SENIOR DESIGNER, PIXAR ANIMATION STUDIOS

Using hard data, amateur astronomer Chris Ford will show astronomy visualizations, aspiring to scientific accuracy that will educate and entertain. You will fly across Mars, traverse Saturn's Rings, see Jupiter up close and learn about how these spectacular simulations are done. Ford will discuss both the tools and the state of the art, and declares, "This media is where Chesley Bonestell would be working today!"



### NEW SFAA MEMBERS

Scope City is offering to new members a \$25 credit toward the purchase of telescopes and binoculars.

Obtain a receipt for dues payment from

Vivian White, Treasurer,

[treasurer@sfaa-astronomy.org](mailto:treasurer@sfaa-astronomy.org)

Contact Sam Sweiss at Scope City to arrange for your discount.

# FOCAL POINT

The Yosemite star party at Glacier Point New Moon weekend was another wonderful time for all. Half Dome was as majestic as ever. We hiked and biked and swam and oh yes, observed. Alpen glow overwhelmed us as we readied for public viewing and the earth's shadow rising in the East at the end of sunset was as spectacular as ever. Pictures and descriptive to follow.

A tip of the eyepiece goes to our new members donating books to our lending library. The Fong family donated a copy of "Mars, the Red Planet" by Isaac Asimov and, at Yosemite, Don Pies donated the three volumes of "Burnham's Celestial Handbook".

Attention all SFAA members who attend the Mt. Tam star parties! If you want to observe at Rock Springs uninterrupted, do some astrophotography, sketch or hunt double stars quietly on your own after the public has left, gatekeepers are always needed at Mt. Tam. Let me know and I'll sign you up with the Interpretive Specialist Samantha "Sam" Toffoli for the next September VIP session at the Pan Toll Ranger station.

Ryan Wyatt our new director of the Morrison Planetarium will speak at August 15th meeting; a good turnout is expected for this event as it's been well publicized and Professor Darryl Stanford (of College of San Mateo and San Francisco State University) is coming and will bring students, so come early for good seats.

A speaker is needed for the September Equinox City Star Party at the Randall. Step forward and give it a go. Let me know if you're a willing volunteer.

Speaking of volunteerism, Saturday while manning our PST at the Randall on Sun, Wind, Water Day I had a chance to speak with and yes, listen to Suzy Gurton the Astronomy Education Manager at the Astronomical Society of the Pacific.

We spoke of how amateur astronomy clubs like ours were successful, or not, and how the outgoing president left a legacy to enrich and fulfill the community or drop out and have the club not fare as well, dead in the water. I'm counting on you to step up and continue hopefully, what I'm (and our Board members) are attempting to do successfully. Élan is formulating a questionnaire designed to do just that, improve the club and make it what you want. Currently our membership is on the rise with younger couples for the most part.

We have lots of new members who just got their first telescope, or don't even have one yet, but are thrilled at the idea of learning and enjoying the sky with like minded people. Remember our motto that's on the backside of each membership application:

Founded in 1952, the San Francisco Amateur Astronomers (SFAA) is an association of people who share a common interest in astronomy and related sciences. Our membership consists of people from all walks of life, ages and educational backgrounds. We are committed to sharing the wonders of the universe and we achieve our goal through regular public lecture programs and star parties, by publishing a monthly bulletin of articles and events, and through our website. Old or new, please participate in any form, and keep the club thriving.

SFAA history at your fingertips: Annette has taken on the task forwarded by Jim Shields. Carol Yates was Bulletin editor as of January, 1988, and Irving Hochman took over (temporarily) shortly thereafter. Jim edited the Bulletin from May, 1988, through December, 1994, and Mark Fleischman took over in 1995. Jim is donating his (almost complete) copies of the SFAA Bulletin for the seven years from 1988-1994, to the club for our archives. We will get them online at a future date. Thank you Jim and Annette. Ken

NOTE: The Board has decided that there will be no November meeting. It's too close to Thanksgiving. We tried other dates but the theatre is all booked up.

We are now officially taking reservations for the January 19th SFAA dinner at Delancy Street. Annette was able to get a great room for us facing the Bay. We'll have an online form soon, but for now, contact Vivian with "Dinner" in the subject line. Linda Mahan has asked that we re-institute the literary award. Start sharpening your pencils!

We have some budding astrophotographers in our midst and will soon update our web pages to reflect that. Make sure you send your jpgs to Joe our webmaster. There's an astrophotography award to be given away, so compose that M object and email it in.

Don't forget Reach for the Stars at College of San Mateo, Saturday, September 29th 12 to 12. <http://www.aancstars2007.org/index.shtml> To volunteer...yes, we need you, let Ed Pieret epieret at [comcast.net](mailto:comcast.net) know, and tell him I sent you.

On other planets: The Mars Rovers are facing an energy crisis because of a severe dust storm.

[http://science.nasa.gov/headlines/y2007/20jul\\_duststorm.htm?list952977](http://science.nasa.gov/headlines/y2007/20jul_duststorm.htm?list952977)

Too bad Mars is only 6.8'. You've got to be an early riser to see it -- like 3 am.

See you in the astronomical twilight.

**KEN FRANK**  
President

## 2007-2008 MEMBERSHIP DUES

SFAA membership now comes due in June. Before now, dues were payable in the month a member first joined. Last year, the SFAA board voted to make everyone's dues payable at the same time - in June of each year. This was done for two reasons: 1) to save a great deal of work for our volunteer Treasurer, present and future, and, 2) for the convenience of members - it's easier to remember! In the past, many members forgot their due date and their membership unintentionally lapsed.

During this first year of transition: If your present membership runs past June 2007, just pay a prorated fee to extend your membership to June of 2008. Simply deduct 1/12 from this year's dues for each month already paid. For example, if you last paid your membership in September of 2006, you have a credit of three more months. Subtract 3/12 (1/4) from your annual fee and just pay that amount. We trust your math. Next year, and every year thereafter, everyone will pay only in June. Easy!

We realize this conversion process may be a bit confusing and more work for some. But this is a one-time transition and it will lessen the work and confusion for all the years to come!

N.B. for those of you who have a club discounted *Sky and Telescope* magazine subscription, you will need to renew your subscription separately. The magazine will send you a renewal notice. In the past, you had to send that renewal notice with payment to the SFAA; now you can mail your *Sky and Telescope* subscription renewal payment directly to *Sky and Telescope*. **Note: Not renewing your club membership on time may mean your magazine subscription(s) will also terminate.**

Thanks for bearing with us during this transition process -- it'll all seem worth it next year! Just complete the membership form on the last page of the newsletter and submit with your renewal check to:

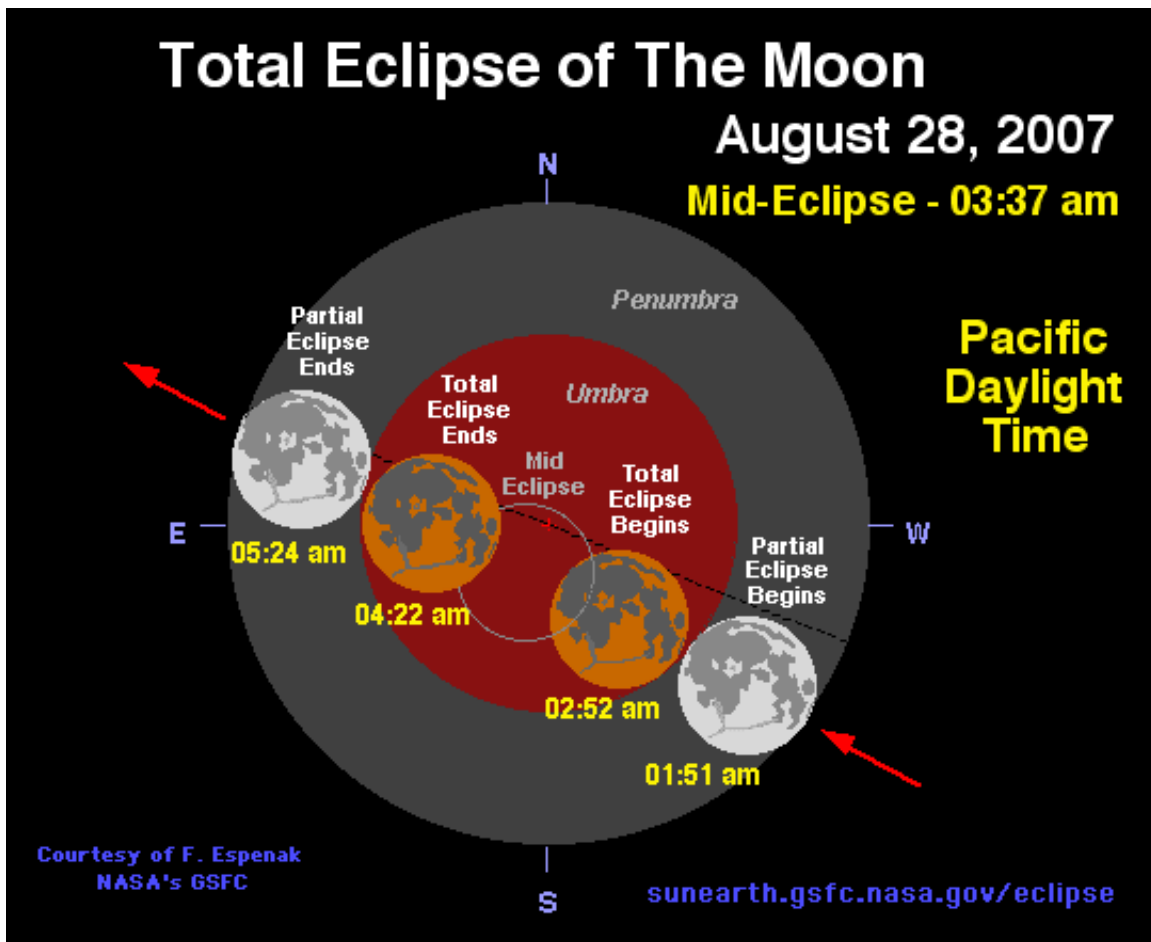
San Francisco Amateur Astronomers  
P.O. Box 15097  
San Francisco, CA 94108

### YEARLY RATES FOR MEMBERSHIP

\$10 – Youth (under 18) Student Membership	\$25 – Individual Membership	
\$30 – Family or Foreign Membership	\$40 – Institutional Membership	\$75 – Supporting
Membership		

### MEMBER BENEFITS INCLUDE

- Subscribing to our Announcements mailing list to receive newsletter, activity and event announcements.
- Interaction with world class speakers as they present cutting edge astronomical research
- Discounts on Sky & Telescope and Astronomy magazines\*
- Discounts on equipment and accessories at local telescope retailers
- Annual club Astrophotography, Literary & Art Awards
- Social events, such as our annual picnic and our awards dinner
- Club telescopes – use one of the club's loaner scopes on a month-to-month basis
- Yosemite Star Party – held at Glacier Point exclusively for SFAA members
- Access to events and resources in Northern California and beyond
- Field trips – to observatories and other locations of scientific interest, such as Mt. Wilson Observatory in Pasadena, Chabot Space and Science Center, Fremont Peak, and the Stanford Linear Accelerator Center
- Extended observing hours at the Mount Tamalpais Astronomy Program
- Access to dark sites in Northern California



You will certainly be asked by your friends and family about the upcoming Total Lunar Eclipse. Here's some food for thought and so you can be prepared with the right answers.

Here are some links for John Westfall's predictions and "What's Up" presentation at the July 26th Mount Diablo Astronomical Society meeting he did. All credit for this information thanks to John and the Association of Lunar & Planetary Observers (ALPO).

These links can all be found in the directory: [www.planitarium.net/sfaa/eclipse/aug2007.pdf](http://www.planitarium.net/sfaa/eclipse/aug2007.pdf) is a page from the latest "The Strolling Astronomer" Page 22 Volume 49, No. 3 Summer 2007 ALPO publication, describing a project that John's coordinating (something similar appeared on p. 61 of the August Sky & Telescope).

[coming\\_les.pdf](#) lists the lunar eclipses happening in the next few years.

[photo.doc](#) gives some great information and projects you can do with photographing lunar eclipses.

[mag\\_est.doc](#) describes methods for estimating the brightness/magnitude of the Moon during a lunar eclipse.

[sched.pdf](#) is a schedule of events and suggested observations during the Aug 28th Total Lunar Eclipse. Should you have any questions please contact [johnwestfall at comcast.net](mailto:johnwestfall@comcast.net)

Enjoy! Ken

# THE PERSEIDS ARE COMING! THE PERSEIDS ARE COMING !



A Perseid fireball photographed August 12, 2006, by Pierre Martin of Arnprior, Ontario, Canada.  
Courtesy of NASA

In a few days, August 12 and 13, spaceship Earth will be zooming into the debris of Comet Swift-Tuttle. Kinda like looking at your windshield while driving into a rain storm. This year we are lucking out with yet one more New Moon weekend. What to do? Well, some of us are heading up to Mt. Lassen National Park. Why? Because its dark and away from sky glow. Where? Bumpass Hell, Devastation Area and Lassen Peak are great observing sites. All three are parking lots located within the park. Where to camp? Try the Lost Creek group campsites. I'd get a place pronto as it's filling up fast. For example here is Manzanita Lake campsites:

[http://www.recreation.gov/nrso/Manzanita\\_Lake\\_Ca/Sites\\_A14\\_A36\\_B12\\_B14\\_B26\\_B52\\_B54/Campsite/r/campsiteDetails.do?agency=NRSO&siteId=140464&parkId=74045](http://www.recreation.gov/nrso/Manzanita_Lake_Ca/Sites_A14_A36_B12_B14_B26_B52_B54/Campsite/r/campsiteDetails.do?agency=NRSO&siteId=140464&parkId=74045)

Lost Creek group campground is near the North entrance of the park. While traveling South from Lost Creek, you'll come to Devastated in 4 miles. The remaining two sites are 10 miles beyond that. Expect a ten minute ride from the group campsite to Devastated, and a half hour ride to the two high altitude sites. Some SFAAer's are staying in and around the park such as Old Station, Shingletown and Mineral. So pack your lawn chair, lean back and enjoy the meteor shower. As John Dobson says, "I don't do gravel". Well, lots of us do. So I say enjoy.

Ken

# ASTRONOMY LITERARY CONTEST

## COMING SOON !!!



Time to sharpen your pencils/boot up your computer and get those composition juices flowing! The SFAA writing contest will be com'in round the bend real soon.

If you have an interesting astronomy-related original short story to share, now is the time to begin writing. Submissions may be fact or fiction, humor or opinion. You may have a favorite story about an observing experience, a trip or about people who have crossed your astronomical path in one memorable way or another. Share the stories of your astronomy observing and/or travel experiences, enable us to appreciate them with you and enhance our own appreciation of the amazing and endless interest of astronomy.

Prizes for first, second and third place winners will be awarded at the December Member's Night meeting. Watch the SFAA web site and the newsletter for forthcoming details to submit your entry!

## DOBSON AND SIDEWALK ASTRONOMERS ON BBC

Last December Dr. Chris Lintott, co-host of Sir Patrick Moore's "The Sky at Night" TV show joined the sidewalk astronomers in Monrovia. They all travelled to San Francisco hoping to film the sidewalk astronomers up there, but the weather didn't cooperate, so we were the backup plan here in Southern California. :-)

Accompanying Chris were series producer, Jane Fletcher, and the camera and sound crews. I brought out my 1988-1989 class-made 10-inch f/7.3 Dobsonian telescope, Stardust. - which John likes to use when he joins us in Monrovia for sidewalk astronomy.

There is another SF dob class 8-inch shown in the segment; it was donated back to the sidewalk astronomers when the owner moved to a three-story walkup flat in NYC. I loan it out frequently.

Our segment (with John Dobson), is on this month's show, which you can see here:

<http://www.bbc.co.uk/science/space/spaceguide/skyatnight/proginfo.shtml>

Click on July's episode - a Sting in the Tail - the show starts out with information about the constellation Scorpius.

Here is our photo album of the evening: <http://photo.whiteoaks.com/2006-12-02-dobson/>

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Jane Houston Jones

Senior Outreach Specialist, Cassini Program

Jet Propulsion Laboratories

Cassini SOC <http://soc.jpl.nasa.gov/index.cfm>

What's Up? <http://education.jpl.nasa.gov/amateurastronomy/index.html>



ANNUAL YOSEMITE STAR PARTY AT GLACIER POINT  
FRIDAY, JULY 13, AND SATURDAY, JULY 14, 2007



Here are some pix from [Mojo](#). Here are more pix from [Ken](#) and from [Doj](#). Add your jpgs by emailing [me](#).

A big thanks go to Peter Schumacher, for doing such a great job of organizing the star party, answering first-timers natural questions and maintaining the e-mail list. Mojo, aided by Jane, also require our thanks for the great presentation they gave both Friday and Saturday night. We had a wonderful New Moon for the weekend. During a lull Saturday evening, while wishing away some clouds, Mojo alerted us to a most spectacular Iridium flare that illuminated a cloud -- new SFAA member, Don Pies, describes it below. It turns out that Michelle Stern, Al's daughter, for those who don't know, keenly observed what may have been [aurorae](#) as researched by Don. By the way, Don donated a full three hardbound copies of Burnham's Celestial Handbook. Thanks Don! This excerpt from Don, with Ken's edits:

*"And now for comments about some unusual sightings on Saturday night, which started shortly after 8:50 PM, 30-minutes after sunset. For those who stuck-out the evening under [broken clouds](#), it felt like watching an episode of X-Files. These events included tickling the public eye with the fast-moving shadow of [Ganymede](#) crossing the face of Jupiter, watching the flickering headlamps of climbers on the face of Half Dome until midnight, a bright glowing dome that developed for several minutes on the Tuolumne skyline which gave us detailed views of fire and smoke amongst the pines, we witnessed the bright flaring burst of light that reflected off an Iridium satellite solar panel as it popped-out from behind a cloud, and tried to explain the two mysterious columns of green illumination that surrounded Half Dome that were initially observed by Michelle. Michelle may have discovered a unique aurora structure that framed Half Dome for several minutes. Michelle has a more vivid memory of what was viewed than myself and can provide a more accurate account, but I'll try to give an approximate description of the event: Sometime between 10:30 and 11:30 PM on Saturday, 7/14, I saw two distinct columns of faint green illumination. Each column was approximately one-hand width wide, and extended upward for 45 to 60 degrees above the horizon. The first column appeared immediately to the right of Half Dome, and approximately one minute later, the second column rose to the sky. The second column tilted to the left, which gave the appearance that they both emanated radially from a common point below the horizon. Within five minutes, the event was over. I was standing near Michelle when we first observed this phenomena, and my gut reaction matched what I had witnessed in 1995, in an extremely dark location in the back country of the Canadian Rockies. Michelle has seen auroras in Norway, and had a similar reaction to how I was impressed. Other proposed explanations from the group included search light beams, car lights, illumination/reflections from the Tuolumne fire, climber's lights and cloud reflections. Our hats go off to Michelle for the keen observing and making this discovery."*

Some of us rode bikes, swam and hiked during the day; others lounged and just relaxed. While cycling on the valley floor Ken bought a copy of 'Fur and Loafing in Yosemite' by Phil Frank for Aeddan and all to read at the picnic table while between observing sessions. Thursday evening Ranger Dave Balogh gave us a great pantomime background into the bears of Yosemite, and the history behind their ways and what the National Park Service did and is now doing in their behalf. This presentation was at the amphitheatre near our C loop campsites on the way to Horse Camp while he stoked a warm campfire and after which we enjoyed roasted marshmallows. We had show and tell [during](#) and after breakfast. Jim Cottle made an elegant and well designed power source he calls "[The Juice Box](#)". More versions to come, I suspect.



Mark Mickels purchased a beautiful wooden eyepiece holder that he proudly demonstrated. Sunday, while most of us headed back to the Bay Area, others made their annual migration to the [Ahwahnee](#) for breakfast or dinner.

The Star Party was held at [Glacier Point](#), hosted by the National Park Service (NPS), with camping at the Bridalveil Creek campground group site. This year, Ranger Dick Ewart graciously provided two extra campsites. Thanks Dick!

For those of you unfamiliar with this event, we are given free reserved admission and camping space.

In exchange, we give two public star parties at Glacier Point, on Friday and Saturday night. We have the public (about 200 - 300 people) from twilight for a few hours, and then the rest of the night (and all day) to ourselves. NPS limits astronomy clubs to a maximum of 30 campers. There is a traditional Gastronomic Astronomic pot luck dinner on Saturday eve, with a contest for the most

imaginative astronomic gastronomic contribution. SFAA membership is required for participation in this annual weekend event. Want to [join](#) SFAA? See page 5 for membership information.



s the photos prove. Saw you there.



*The Continuing Search for Dark Skies with Matt and Tim*

Tim and I had a great time with all of the SFAA folks at the yearly Yosemite star party. Friday night was just great, with outstanding observing conditions, and Saturday night, despite the clouds, was great for being able to relax and do a lot of naked-eye and low-magnification stargazing.

After Yosemite, we continued our travels into Nevada for a full ten-day vacation. Our first destination was Great Basin National Park. To get there, we traveled to Fallon, NV, and then across Highway 50, "The Loneliest Road in America."

I highly recommend Great Basin National Park to those who like wilderness camping -- it's rustic, at a very high altitude (the campground we stayed at was at 10,000 feet, and there are lower ones in the mid 7000's), rustic trails, lots of wind to keep you awake at night as you wonder if your tent will still be around you in the morning.

Unfortunately, because of the awesome mountains and old trees, the horizon is very high. But the compensations were worth it! This park and its trails, caves, and ranger programs were so worthwhile that we ended up staying an extra night, for a total of 3 nights and 3 1/2 days. We got to see Lehman Caves, a bristlecone pine grove (we'll see more of those later in the trip), a glacier, and lots of incredible Great Basin alpine scenery. The ranger programs are really cool, too. The hiking is intense, with some trails having a thousand feet or more of elevation change, but the views and features help you forget your exertions.

We traveled back to California on Highway 6, which travels for some of its distance across the top of the Nevada Test Range. On the way, we toured Lunar Crater and the surrounding volcanics. It was awesome! It was dusty! It was incredibly remote! Highway 50 may bill itself as "The Loneliest Road in America," but let me tell you, it got the name because so few people travel Highway 6 that no one knows it's there, much less how very, very lonely indeed it is.

That night we stopped in Tonopah, NV, whose local star-hounds have managed to get national billing for the town as the best star-gazing location in the continental US. They've also got grants from NV state tourism to produce flyers. Someday, we should take them up on their slickly-produced, glossy, professionally printed invitations! It's very rural, though -- only three big restaurants, and two of those are glorified diners. However, the Central Nevada Museum there is another attraction besides the stars that is well worth seeing. It not only covers the town and the nearby Goldfield, but also the Nellis Airforce Base and Nevada Test Range, just a few miles south of town.

On the two-day return trip to California, we stopped at the Bristlecone National Forest above Owens Valley. Though we didn't stay overnight, that place looks like it has some excellent horizons, and it DEFINITELY has the altitude and distance from most light domes. Another year, perhaps.

On the final day of our trip, we traveled out of Mammoth Lakes (incredibly busy even though there's no skiing at this time of year) through Bridgeport and over the Sierra via Highway 108. For those of you who are interested in geology -- and our trip was a geological smorgasbord! -- this route is a must-try. It is also breathtakingly gorgeous, a fine coda to our round of the national parks. On the way, don't miss the Leavitt Falls Overlook, on the left side of the road after you start to climb out of the valley where the horse and pack camp is. Then there will be plenty of other beautiful things to see as you climb to Sonora Pass and after you drop back down to the Central Valley.

I'd list a lot more that we did and saw, both on 108 and throughout the trip, but there are only so many pages in Above the Fog! See you all again in the dark!

# Barnard's Star

Linda Mahan

Norman and I met Dana Pastchick, an observer new to the Bay Area, at Lake Sonoma recently and he sent this to us. We each took turns viewing Barnard's star in various telescopes while viewing that night.. It shows how Barnard's Runaway Star has moved against the background stars throughout history. Dana is a long-time observer and formerly of a club in Southern California.

From **The Night Sky Observer's Guide**, also known as NSOG See page 290 of Volume 2, Spring and Summer.

**Barnard's Star** - 17hours 58minutes, +04degrees 41minutes In Ophiuchus. 9.5 magnitude dwarf red star



*(Remember to note if your view in the eyepiece is "flipped" in relation to this animation [animated on website])*

Barnard's Runaway Star has the largest proper motion of any star in the sky, moving 10.31 minutes per year in position angle 356 degrees – almost due north. Since its discovery in 1916 the star has moved over 12 minutes, almost half the apparent diameter of the Moon. One of the reasons for the star's large proper motion is that it is the second nearest star to the Solar System, only 6.0 light years away. Like all red dwarfs, it is intrinsically a very faint object, its absolute magnitude of +13.4 corresponding to a luminosity of a mere 1/2500 Sun. Careful measurements have shown that the star is not moving in a perfectly straight line but is "wobbling" - presumably under the gravitational influence of at least one planetary body. Given that the star's mass is only 16% that of the Sun, the influence of a Jupiter-sized body upon its motion would be appreciable. At least two large planets are suspected to be orbiting this red dwarf.

Recording the movement of Barnard's Star can be very interesting: a drawing of the star field made once a year will dramatically reveal the object's path across the heavens. To locate Barnard's Star, sweep 40minutes NW of 66 Ophiuchus until you spot a reddish glow.

## WHAT'S UP ON THE MOON



Photo courtesy of NASA

"What's Up – July," the monthly amateur astronomy-themed podcast is up on the public JPL website at <http://www.jpl.nasa.gov/>. <<http://www.jpl.nasa.gov/>> I'm the host of the video. :-) It's geared to members of the public, and I think this month's "Phases of the Moon" topic will be useful to all of you, not just this month, but every month.

Here's where "What's Up" is permanently archived -- I hope you use it!  
<http://education.jpl.nasa.gov/amateurastronomy/index.html>

The video is only two minutes long and is packed with great amateur images. You'll find some simple (aimed at the general public) downloadable sky (or moon this month) charts, links to NASA amateur astronomy networks, and this is where the What's Ups are permanently archived. There are several different download options for museum, planetarium, astronomy club, classroom and national parks use. If you need other options, just let me know!

You can download these right onto your video iPOD, too. It's on the NASA Podcast page - <http://www.nasa.gov/> (if you don't already get it on iTunes.) How cool is that!

If you use them in any way, let me know!

Jane Houston Jones  
<http://www.whiteoaks.com>

**September 26 – 7:30 p.m.**  
**RANDALL MUSEUM**  
**PLANETARY SOCIETY PUBLIC LECTURE**  
**"THE PHOENIX MISSION TO MARS TO BEGIN MARTIAN POLAR EXPLORATION"**

You are invited to "The Phoenix Mission to Mars to begin Martian Polar Exploration". The Planetary Society and the Randall Museum are co-sponsoring an exciting and informative lecture on the launch of the Phoenix Mission to Mars' north polar region. The Lecture will be held on Wednesday, September 26, 7:30pm at Randall Museum Auditorium.

NASA's Phoenix Mars Lander will arrive at Mars in late May 2008. The lander's mission is to claw down into the icy soil of the Red Planet's northern plains. The robot will investigate whether frozen water near the Martian surface might periodically melt enough to sustain a livable environment for microbes. To accomplish that and other key goals, Phoenix will carry a set of advanced research tools never before used on Mars.

Chris McKay, Chair of The Planetary Society Advisory Council, is a co-investigator on the Phoenix mission. He has been actively involved in planning for future Mars missions including human settlements. He has also been involved with polar research since 1980, traveling to the Antarctic dry valleys and more recently to the Siberian Arctic to conduct research in these Mars-like environments.

Come join us on September 26th to hear what's in store for this exciting mission in search of life in our Solar System. For a map of Randall Museum Auditorium please click [here](#).

For more info: Phoenix project – <http://www.planetary.org/explore/topics/phoenix/>  
Dr. Chris McKay – <http://ic.arc.nasa.gov/projects/sigma/mckay.html>  
Randall Museum -- <http://www.randallmuseum.org/>

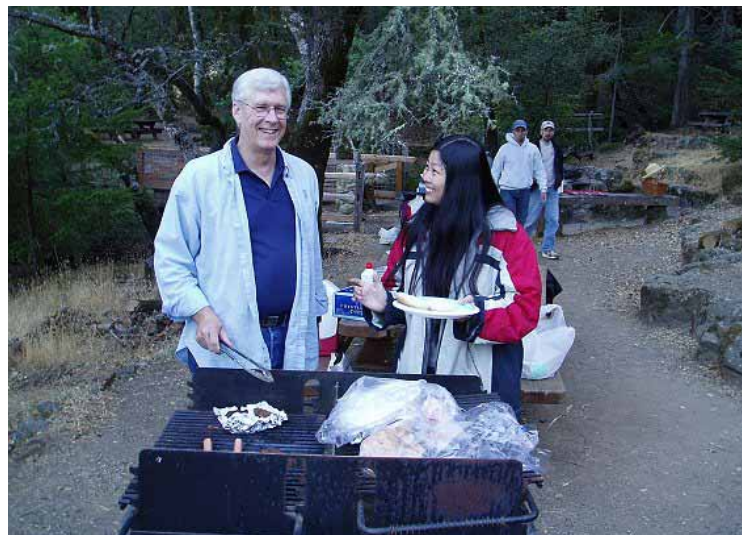
## SFAA ANNUAL BOOTJACK STAR-B-Q Saturday September 8, 2007



This is the biggest opportunity during the late summer months for members to meet, greet, eat, and retreat to dark skies. Our annual Star-B-Q will be held at Bootjack Campground on Mt Tam.

The Star-B-Q starts in the afternoon with a picnic. SFAA supplies the basic main course protein (hamburgers, hot dogs) - you bring whatever you like to drink and share. Immediately following, the group repairs to our Rock Springs permit area behind locked gates for a night of members-only stargazing.

Let [Vivian White](mailto:Vivian.White@sfaa-astronomy.org) [Treasurer1@sfaa-astronomy.org](mailto:Treasurer1@sfaa-astronomy.org) know if you're coming by September 1<sup>st</sup> (with Bootjack in the subject line) -- and please show up this time! With that said, if you need to cancel let John know for obvious reasons, like having six months' worth of hot dog buns in my freezer! Thanks, Ken





# AANC-CON 2007

SEPTEMBER 29, 2007 • CSM CAMPUS

1700 West Hillsdale Boulevard, San Mateo CA

Noon – Midnight

Hosted by San Mateo County Astronomical Society & College of San Mateo  
Sponsored by AANC. This year's theme: "Reach For The Stars."  
We all look forward to a great conference!

Speakers include: Jane Houston-Jones- "Cassini Mission Outreach"  
Lynette Cook- "Visualizing what it's really like out there."  
Dr. Pamela Gay- "What's New in Astronomy" (live video/audio feed)  
Vivian White-ASP "Night Sky Network/Project Astro"

## KEYNOTE SPEAKER: Imke de Pater - Planet Discoveries *with images by Christopher Go*



- Activities:
- ▲ Planetarium shows by Professor Darryl Stanford
  - ▲ SMCAS activities for kids (*adults too*)
  - ▲ Daytime viewing of solar prominences, night sky views through SMCAS scopes and CSM's 20" RC
  - ▲ CCD imaging
  - ▲ Astro Vendors / Raffle!
  - ▲ AANC Awards
  - ▲ Mirror Grinding - Chabot Telescope Makers Workshop
  - ▲ KCSM-FM / CSM Astro. Dept. "Jazz Under The Stars"
  - ▲ ASP Hands-On Astronomy Activities



For registration and other information visit: <http://www.aancstars2007.org/>

The AANC acts as a forum for communication to the Astronomy Community, funds public outreach events, and provides seed money for educational programs. We invite everyone to AANC-Con 2007!

<http://www.aancstars2007.org/> ▲ <http://www.smcas.com/> ▲ <http://www.smcad.net/accounts/csmastronomy/home.html>





MT. TAM ASTRONOMY PROGRAMS  
MT. TAM MOUNTAIN THEATER  
MT. TAMALPAIS  
SEPTEMBER 15 - 8:-00 P.M.

DR. JANICE VOSS  
NASA-Ames Research Center  
LIFE AS AN ASTRONAUT: HIGHLIGHTS OF STS-99

Shuttle Mission STS-99 launched on Feb 11, 2000 was Dr. Voss' fifth space flight. Dr. Voss will describe the mission and other aspects of life as an astronaut.

Carpool with your friends, bring flashlights and dress warmly. It can be cold sitting on rocks! All programs are free, and we encourage you to bring students and family members of all ages. Telescope viewing will follow the program, weather permitting, until about 11:00pm in the Rock Springs Parking Lot.

If the weather is questionable on the day of the program, call the SFAA hotline at 289-6636 (the Astronomy hotline will not be changed on this program). Usually the program goes even if the sky is not inviting for observing. And remember that when the fog comes in we are usually above it and welcome it to block out the lights of San Francisco.

Thank you for your interest in the Mt Tam Astronomy Programs.  
See you on the Mountain!

Coming .....

September 15 – 8:00 p.m.

JOHN DILLON

Randall Museum

WHEN ASTRONOMY BECAME A SCIENCE

An examination of the amazingly sophisticated astronomy that flowered more than 2000 years ago at the legendary Museum of Alexandria.

Oct 13 – 7:30p.m.

Dr. Steve Stahler

UC Berkeley

HOW STARS ARE MADE

*Stars are the natural outcome of processes that occur throughout galaxies. Research has led to a good understanding of the basic evolutionary process, but deep mysteries still remain.*

